UNITED STATES PATENT AND TRADEMARK OFFICE

UNITED STATES DEPARTMENT OF COMMERCE
United States Patent and Trademark Office
Address: COMMISSIONER FOR PATENTS
P.O. Box 1450
Alexandria, Virginia 22313-1450
www.uspto.gov

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/597,650	03/13/2007	Tetsushi Kasahara	P30417	4373

52123   7590   06/16/2008
GREENBLUM & BERNSTEIN, P.L.C.
1950 ROLAND CLARKE PLACE
RESTON, VA 20191

EXAMINER
BONZO, BRYCE P

ART UNIT	PAPER NUMBER
2113	

NOTIFICATION DATE	DELIVERY MODE
06/16/2008	ELECTRONIC

Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Notice of the Office communication was sent electronically on above-indicated "Notification Date" to the following e-mail address(es):

gbpatent@gbpatent.com
pto@gbpatent.com

-- *The MAILING DATE of this communication appears on the cover sheet with the correspondence address* --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE <u>3</u> MONTH(S) OR THIRTY (30) DAYS,
WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.
- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed
  after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
  Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any
  earned patent term adjustment. See 37 CFR 1.704(b).

Status

1)☒ Responsive to communication(s) filed on <u>02 August 2006</u>.

2a)☐ This action is **FINAL**.   2b)☒ This action is non-final.

3)☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is
closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4)☒ Claim(s) <u>1-7</u> is/are pending in the application.

    4a) Of the above claim(s) _____ is/are withdrawn from consideration.

5)☐ Claim(s) _____ is/are allowed.

6)☒ Claim(s) <u>1-7</u> is/are rejected.

7)☐ Claim(s) _____ is/are objected to.

8)☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9)☐ The specification is objected to by the Examiner.

10)☒ The drawing(s) filed on <u>02 August 2006</u> is/are: a)☒ accepted or b)☐ objected to by the Examiner.

    Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

    Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).

11)☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

12)☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

    a)☒ All   b)☐ Some * c)☐ None of:

        1.☐ Certified copies of the priority documents have been received.

        2.☐ Certified copies of the priority documents have been received in Application No. _____.

        3.☐ Copies of the certified copies of the priority documents have been received in this National Stage
        application from the International Bureau (PCT Rule 17.2(a)).

    * See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

1)☒ Notice of References Cited (PTO-892)

2)☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)

3)☒ Information Disclosure Statement(s) (PTO/SB/08)
Paper No(s)/Mail Date <u>3/13/07, 12/27/2006</u>.

4)☐ Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____.

5)☐ Notice of Informal Patent Application

6)☐ Other: _____.

NON-FINAL REJECTION

Status of the Claims

Claims 1-7 are rejected under 35 USC §103.

Rejections under 35 USC §103

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all

obviousness rejections set forth in this Office action:

> (a) A patent may not be obtained though the invention is not identically disclosed or described as set
> forth in section 102 of this title, if the differences between the subject matter sought to be patented and
> the prior art are such that the subject matter as a whole would have been obvious at the time the
> invention was made to a person having ordinary skill in the art to which said subject matter pertains.
> Patentability shall not be negatived by the manner in which the invention was made.

Claims 1-7 are rejected under 35 U.S.C. 103(a) as being unpatentable over

McGinnis (United States Patent No. 7,177,989 B1).

As per the claim 1, McGinnis discloses:

1. A memory which data can be written to and read from by a data processor,

comprising:

a host interface that transmits and receives a command and data to and from the

data processor (items 30,21,26);

a memory that stores data (item 13);

a controller that controls the operation of the memory card (items 11/12);

and a storage section that stores specified management information (inherent as the retry number used later must be stored somewhere).,

wherein the management information includes retry setting information which specifies whether a retry function is executed or not when an error occurs during an operation of reading data to the nonvolatile memory (column 2, lines 58 through column 3, line 15), and

the controller refers to the retry setting information in the data reading operation, and controls the data writing operation so as to disable the retry function in the event of an error in the data writing operation, when the retry setting information indicates disabling of the retry function or to enable the retry function in the event of an error in the data reading operation, when the retry setting information indicates enabling of the retry function (column 2, lines 19-38).

McGinnis does not explicitly disclose:

the memory implemented as a card.

Official Notice is given that it is notoriously well known to implement many forms of memory as cards. The small size and energy requirements of solid state memory make the mounting of memory on cards a well known implementation. The cards protect memory, allow fixed bus paths and enforce a measure of interoperability to the memory market through form factors. Thus it would have been obvious to one of ordinary skill in the art of computer processing to implement the memory of McGinnis on a card, thus conforming thus invention to the industry manufacturing norms.

McGinnis does not explicitly disclose:

wherein the memory is non-volatile.

McGinnis never limits the application of his memory system.   The system is nominally to be used in a fault tolerant server environment, and presumably as the data passes through a memory controller, a system memory.   Official Notice is given that it is notoriously well known to implement vital system memory operation in the non-volatile memory for transaction based systems. This is done as often transaction are often only stored in system memory or a cache awaiting a disk.   Thus if the event of a power failure, non-volatile memory is the only safeguard for this data. Thus it would have been obvious to one of ordinary skill in the art of computer processing to implement the memory of McGinnis as a non-volatile memory, thus allowing the system to preserve the data through a power interruption.

McGinnis does not explicitly disclose:

the operation is a write, as opposed to a read.

Official Notice is given that reading and writing data from a memory are intimately linked, and that it notoriously well incorporate read error handling into the write error handling systems. The most common example of this is the write-verify operation, where data is written and then read back to ensure the system properly stored the data. It is commonly used in mission critical systems from RAM to disk storage. As the either the write or the read may have failed in such a system, both processes use error

detection techniques. Importantly, as the result of a write is impossible to determine without a proper read, the two operations are tightly intertwined, as such any secured write must be viewed a write in combination of a read. Thus it would have been obvious to one of ordinary skill in the art at the time of invention to implement the well known practice of incorporating reading methodology into a write methodology into the system of McGinnis, producing a more secured write system.

2. The memory card according to claim 1, wherein the management information includes characteristic information specific to the memory card, and the controller transmits the characteristic information to the data processor according to the request from the data processor (column 2, lines 19-38).

3. The memory card according to claim 2, wherein the characteristic information includes information regarding maximum required time for data writing to the memory card (column 3, lines 36-43).

As per claim 4, McGinnis does not explicitly disclose:

wherein the characteristic information includes information regarding a frequency of the retry process occurring in the memory card.

Official Notice is given that it is notoriously well known to monitor and store retry frequencies in memories. Memories are susceptible to two main classes of errors, transient and sustained. Transient errors are generally not due to device failure, but

other fluctuations in the system (for instance radiation) while sustained errors generally indicate a device failure which will require removal. Intermittent errors generally are resolved after a few tries, while sustained errors are recognizable by a high retry count. thus it would have been obvious to eon of ordinary skill in the art of computer processing to store retry frequency data in the system of McGinnis, thus allowing the user to determine the nature of the failure and take additional corrective steps in the case of failure of a memory device.

Claims 5-7 are the data processor, control method, and setting method of claim 1 and are rejected on the same grounds.

Conclusion

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Bryce P. Bonzo whose telephone number is (571)272-3655. The examiner can normally be reached on Monday-Thursday.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Robert Beausoliel can be reached on (571)272-3645. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR.

Status information for unpublished applications is available through Private PAIR only.

For more information about the PAIR system, see http://pair-direct.uspto.gov. Should

you have questions on access to the Private PAIR system, contact the Electronic

Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a

USPTO Customer Service Representative or access to the automated information

system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

/Bryce P Bonzo/
Primary Examiner, Art Unit 2113